

# Rock Thin

## Logging Feasibility Report

### Rock Creek Watershed

### Central Coast Ranger District

### Siuslaw National Forest

4/18/2012

## Summary

Commercial thinning of sixteen managed stands with an years of origin from 1957 to 1973 (39 - 55 years old) and divided into 17 thinning units. The residual trees left after harvest operations are complete will range from 55 trees per acre to 80 trees per acre. Acre estimates are a result of mapping on GIS and totals ??? acres. All units were cruised and the cruised volume to be removed is ??.

The project area is located within the Corvallis watershed and the legal descriptions of the units are as follows : T. 12S., R. 7W., Sec. 14, 15, 22, 23, 27

Douglas-fir is the dominant tree species, with hemlock found in small amounts on some of the units. Felling of hardwoods is only anticipated to occur minimally to insure safety of operations. No Pacific Yew were observed inside the unit boundaries, but should any exist on site, they are not to be felled. Minimum diameter of the trees to be harvested is 7" DBH.

Temporary road to be reopened will total approximately 4,765 feet or 0.90 miles. New temporary road to be constructed will total approximately 790 feet or 0.15 miles. All temporary roads (both old and new) are to be closed after operations are complete. No deadman or multi-stump anchors are planned. The use of **intermediate supports** and **tailtrees** will be necessary on many of the units and tailholding on opposite slopes where line lengths, topography and anchors exist is encouraged.

Field run profiles were input into the computer and analyzed using "skyline XL".

Most of the road system will require some work prior to haul, whether blading, waterbar removal, brushing or roadside clearing.

A variety of yarding systems will be employed to harvest these thinnings. The majority of the yarding will be accomplished using a skyline system in both single and multispan configurations. Both "yoader and tractor" are planned to do a significant portion of the yarding. Also, areas lying adjacent to the roads and spurs, where felling occurs to the road, a loader walking these roads will is planned to pick up these trees. A total of 23 skyline landings are planned for this, as well as 10 yoader landings and 13 tractor landings. Some of these landings will be used for more than one yarding system. All temporary roads are to be closed after harvest operations are complete.

## **Resource Management Objectives**

The silvicultural prescription, unit layout and logging / transportation plans are designed to meet the following objectives:

- Speed the stands development of late successional forest characteristics in managed stands by thinning these heavily stocked stands to maintain stand health, promote tree growth, and enhance diversity.
- Manage riparian reserves consistent with the Northwest Forest Plan's Aquatic Conservation Strategy.
- Protect water quality and fish habitat in all streams.
- Minimize soil disturbance in all phases of harvest activity.
- Protect T & E species by limiting operating seasons.

## **Timber Characteristics**

All 17 units are plantations established during the late 50's thru the early 70's and have had various precommercial activities within them. Portions of different units have different stocking levels and tree sizes as a result of not only different site characteristics but different precommercial activities.

The silvicultural prescription for the different units is designed to leave a varying number of trees per acre after harvest activities are complete ranging from 55 trees per acre to 80 trees per acre. This is an over the "sale area" goal and will likely vary somewhat on an acre to acre basis.

## **Recommended System**

### **A. Logging System Requirements**

The following requirements are designed to meet the resource objectives described earlier.

#### **1. Skyline Logging System**

- Except in lateral yarding, the yarding system must be capable of keeping the leading end of the log suspended above the ground during the inhaul portion of the yarding cycle (single end suspension required).
- Except in lateral yarding, the yarding system must be capable of keeping the logs fully suspended above the ground during the inhaul portion of the yarding cycle (full suspension required).
- Where skyline corridors pass through stream buffers, skyline corridors will be spaced so that no more than 20% of the existing canopy will be removed within any given 1,000 feet of reach of stream.
- The minimum corridor spacing will be 120 feet at the back end of where yarding occurs and the maximum corridor width will be no more than 12 feet after harvest activities are complete.

### **B. Acceptable Yarding Equipment**

#### **1. Skyline Logging System**

- A skyline system capable of transporting logs for a horizontal distance of at least 900 feet. A rigging length of up to 1,300 feet may be necessary to reach tailholds.
- The skyline system must: (1) be capable of meeting log suspension requirements stated above; (2) be capable of lateral yarding up to 150 feet ; (3) be capable of operating in a multispan configuration.
- A carriage capable of maintaining a fixed position on the skyline while lateral yarding up to 150 feet on either side of the skyline and be capable of passing support jacks where intermediate supports are used.

### C. Recommended Yarding System

Make	Linkbelt-crane (used)
Tower Height	50'
Skyline Length / Diameter	1,650' of ¾" EIPS (all on yarder)
Mainline Length / Diameter	1,700' of 9/16" EIPS (all on yarder)
Haulback Length / Diameter	2,000' of ½" EIPS (all on yarder)
Strawline Length / Diameter	

Carriage / Make : Acme 19

Weight 1,260 lbs.

Other Equipment : Hardware for rigging two tailtrees, two intermediate supports, two sets of tree plates and a used landing cat for clearing / constructing landings and skidding of logs. **Yoader**

### Unit Narratives

#### Unit # 1 – (stand # 013)

23 acres, year of origin 1959

Residual trees per acre after harvest operations are complete- 80

This is the northeastern unit and lies inside the lower switchback on road 3409 and directly above the City of Corvallis water reservoir. The unit generally has a northern aspect with moderate slopes and a flat along the lower portion of the unit. One live stream begins within the unit and is buffered. This stream feeds directly into the city reservoir.

One "temporary" spur 230 feet in length will be constructed to service landing A. This spur will sidehill across slopes up to 40% and have an adverse grade of up to 18%. Landings B and C are located in road 3409

Three landings are planned for this unit. Landings A and B are planned as "single span" skyline landings, while landing C is planned as a tractor landing. To meet suspension requirements it

will be necessary to utilize tailtrees on some of the skyline roads from both landings, although intermediate supports are not anticipated. Skyline roads are laid out in a manner to avoid yarding through the buffered stream. Landing C is planned as a tractor landing for the large bench to the north and west of the buffered stream. Particular locations of skid trails for the tractor have not been identified and should be worked out between the sale administer and the operator.

Unit # 2 – (stand # 014)

13 acres, year of origin 1959

Residual trees per acre after harvest operations are complete- 65

This unit lies on the south side of road 3409 roughly ½ mile west of unit 1. It has a general aspect of south and is located mostly on slopes of less than 30%. The ? fork of Rock Creek lies approximately 200 feet south of the southern boundary, while a small tributary runs a portion of the way between the two pieces that make up this unit. This unit is in two pieces as a result of a band of poor stocking running through a portion of the original stand.

Two old grownover spurs will be temporarily reopened to service landings A and B. The primary spur, which closely follows the western boundary of the unit is 740 feet in length and will need little work other than clearing to make it suitable for use. The other spur takes off the first spur near its midpoint and proceeds easterly for 315 feet to an old landing (labeled B) for this sale. It also will take little other than clearing to make it suitable for use.

Five landings labeled A thru E are planned for this unit. Landings A and B are planned as skyline landings, while landing C is located in road 3409 near the eastern corner of the unit and is planned as a “yoader” landing. Landings D and E are both tractor landings further up the 3409 and also located in or adjacent to the 3409. Particular locations of skid trails for the tractor have not been identified and should be worked out between the sale administer and the operator.

Unit # 3 – (stand # 010 )

18 acres, year of origin 1959

Residual trees per acre after harvest operations are complete- 65

This unit is located along and at the end of the 3409-115. The unit generally faces north down into the North FK. Of Rock Creek, although a buffered stream running north down through the middle of the unit also gives it both east and west facing slopes. Both the west and east sides near the boundary are flat with slopes less than 20%. Proceeding toward the center of the unit, slopes along the buffered stream are up to 80%.

The 115 spur is a system road but has not been maintained in years and therefore brushed in and will need brushing / clearing, as well as some blade work before it will be suitable for use. Inside the unit two more spurs are planned. The eastern one is an old grownover spur 1,080 feet in length and will service landings A and B. Other than clearing and construction of landing B, little work will be necessary to make it suitable for use. Landing C sits on the 115 spur in a

wide area. The other spur for this unit will be constructed to service landing D. This new "temp" spur will be 270 feet in length and over ground with slopes of less than 20%.

This unit is designed to use five landings labeled A thru E to complete the yarding. Landings A, B, D, and E are planned as skyline landings as well as being used as landings for the ground based system. Yarding from landing C is planned to be completed using a "yoader", although much of it could be accomplished with a ground based system. Tailtrees will be necessary on some of the skyline roads. In several cases, it will be necessary for the skyline to pass through the buffer and anchor on the opposite slope, but at no time is yarding planned through the buffer.

#### Unit # 4 – (stand # 021)

14 acres, year of origin 1968

Residual trees per acre after harvest operations are complete- 55

This unit lies at the east end of the 3405-117. Although this is also a system road, the far end of it has not had maintenance in several years and is grownover beyond unit #5. This unit generally faces south, although the east end has an area that faces to the east. The ground has moderate slopes with some benches. The unit lies north of connection creek and one live buffered tributary to Connection Creek begins within the unit. No yarding through the buffer is anticipated.

The 117 spur is has been waterbarred for its full length and is generally in good shape, although there is a couple of places where a portion of the road grade has slumped or is beginning to slump and will need more attention than just clearing, brushing and blading the road. One "temp" spur approximately 100 feet in length is planned to service landing C. This spur crosses a flat bench to place the landing out near the edge of a slope break.

Four landings labeled A thru D are planned for this unit, with A being at the east terminus of the 117 spur and D located near the west end of the unit. Landings A, B and D are located on or adjacent to the 117, while landing C is at the south end of a 100 foot spur. Landings A, B, and C are planned as "yoader" landings, as well as being tractor landings. Landing D is planned as a skyline landing. No intermediate supports are planned, but the use of tailtrees will be necessary on many of the skyline roads.

#### Unit # 5 – (stand # 026 & 030)

7 acres, year of origin 1965 & 1959

Residual trees per acre after harvest operations are complete- ?

This unit lies on either side of the 3405-117 and is a combination of two stands. It lies on the north side of Connection Creek and in general has a south aspect, although the small area immediately north of the 117 spur has a north aspect. The ground is generally gentle or flat with moderate slopes existing near the north boundary.

One intermittent stream originates within the unit and is buffered. Connection Creek lies to the south of the unit and is also buffered.

One temp spur to be re-opened off of the 117 spur is planned. This spur traverses over gentle to flat ground and is in good shape and will be re-opened for 300 feet to service landing A. Little other than clearing will be necessary to make it suitable for use.

This unit is planned to be serviced by two landings labeled A and B. The southern landing (A) is planned as a tractor landing and has none of the skid trails identified. This should be accomplished between the operator and the sale administer. The northern landing (B) is planned as a skyline landing and is located in the 117 spur. This landing is planned to service that area to the north of the 117 spur, but could also act as a tractor landing for a portion of the unit lying south of its location. Several skyline roads will pass through the stream buffer and full suspension of this stream is required. To meet suspension objectives, it will be necessary to use **mature trees** located along the perimeter of the unit, as tailtrees. These bigger trees will allow greater rigging height, providing increased suspension. Skylining this portion of the unit will also require the use of a haulback, as a portion of the area has a greater elevation than the landing.

#### Unit # 7 – (stand # 030)

17 acres, year of origin 1959

Residual trees per acre after harvest operations are complete- 80

This unit in general lies between the 3405 and the 3405-117, with the greatest portion of the unit having a northern aspect. Some short slopes face to the south and east near ridges and draws. This is overall a gentle unit with the greatest slopes less than 30%.

A marshy area and one small stream divide this unit splitting it into two separate pieces, separated by the buffers on either side of the marsh and stream. No yarding through this buffer is anticipated.

One "new" temp spur with a length of 190 feet is planned and will service landing A. This short spur will allow access to the landings location, which is above the 117 spur and will have a short pitch of 15% grade.

Five landings (labeled A thru E) are planned for this unit. The first four (A thru D) are planned as tractor landings, while landing E is planned as a yoader landing. Skid roads for the tractor portion of the unit have not been identified and should be located by both the operator and the sale administer. The southern portion of the unit, lying inside the switchback on 3405 and above the road, is planned to be skidded to landing D. The yoader landing (E) is designed to yard the southwest corner of the unit and sit in road 3405 while doing so. Due to the gentle nature of the ground, it will be necessary to use tailtrees along the boundary to meet suspension requirements.



Unit # 8 – (stand # 039)

10 acres, year of origin 1965

Residual trees per acre after harvest operations are complete- 80

This unit lies inside a switchback on the 3405 immediately east of the 113 spur. Slopes are moderate to gentle and the aspect is generally south. Two ridges run through the unit and landings are placed at the top of each.

One intermittent stream exists near the western portion of the unit and has been buffered outside the unit. No activities involving the stream are anticipated.

No spurs or roads are planned for this unit.

Three landings are planned for this unit and labeled A, B, and C. Landings A and B are planned as skyline landings and are each located at the top of a ridge, where the 3405 road crosses. Turnouts exist and very little work will be necessary to make them suitable for use. Landing C is planned as a tractor landing and is located adjacent to an old "borrow" pit. Little work, other than clearing, is anticipated in making this landing suitable for use. For the skyline portion of the unit, some tailtrees will be necessary to meet suspension requirements, although some of the skyline roads will be able to span across swails and anchor on opposite slopes.

Unit # 9 – (stand # 043)

8 acres, year of origin 1956

Residual trees per acre after harvest operations are complete- 75

This unit lies south of both roads 3405 and the 3405-113. It is divided into two pieces as a result of a buffered stream that runs through the unit (becoming intermittent where it is adjacent to unit 8). The unit has a general exposure of south and lies on gentle to moderate ground.

Another buffered stream lies along the southern boundary of the unit. Skyline roads are anticipated through both the stream buffers but, no yarding through the buffers is planned.

One temp spur 230 feet in length will be re-opened to service landing A. The spur itself is in good condition, but the original landing it serviced has had road debris placed on it and this debris will need to be relocated to provide suitable size for the landing.

Three landings (labeled A, B, and C) are planned for this unit. Landings A and B are planned as skyline landings, while landing C is planned as a yoader landing. Landing A will yard the bulk of the unit, while landing B (located in road 3405) is designed to yard the area north of the interior buffer. It will be necessary for landing B to use a haulback to yard that area to the WNW (near the jct. of the 113 spur. Landing C is planned as a yoader landing and designed to yard the western corner of the unit. Some tailtrees from landing A will be necessary, although over much of the unit, tailholding on opposite slopes is an option.

Unit # 10 – (stand # 047)

2 acres, year of origin 1973

Residual trees per acre after harvest operations are complete- 65

This unit lies above the 3405-113 spur and has a southern exposure. No live streams exist within the unit. Short pitches of slope may reach 50% but generally the slopes are less than 30%. Old skid roads can be found inside the unit.

It will be necessary to construct an 80 foot "temp" spur for skidding logs from above the road and down onto the 113 spur where the landing is to be located. Only one landing (labeled A) is planned for this unit. Trees felled along the north boundary may best be picked up using a loader walking the 113 spur.

Unit # 12 – (stand # 048)

5 acres, year of origin 1957

Residual trees per acre after harvest operations are complete- 60

This unit is located on the east side of the 113 spur and generally has a south and east exposure. One buffered stream lies to the south of the unit. The ground on the unit is of moderate slope (less than 60%).

The buffered stream running south of the unit will have some skyline roads passing through the buffer, but no yarding through the buffer is anticipated, as yarding is planned to occur away from the buffer.

An old blocked spur 230 feet in length will service landing A. This spur is in good condition but the debris barrier at the beginning will need to be blocked as well as a moderate amount of work for the landing itself, as it is in poor condition.

One landings (labeled A ) is planned for this unit. Landing A is planned as a skyline landing. Tailtrees will be necessary on some skyline roads, but anchoring on opposing slopes will be an option in some cases.

Unit # 13 – (stand # 101)

2 acres, year of origin 1968

Residual trees per acre after harvest operations are complete- 50

This unit lies east of road 3405-113 and generally faces east. It is of moderate slope (less than 60%) and does not involve any live streams.

The one landing (labeled A) planned for this unit is located in the 113 spur and is planned as a yoader landing, needing little work to make it suitable for use.

The yoader landing will involve spans of no more than 400 feet, but to meet suspension requirements it will be necessary to use tailtrees located along the unit boundary.

Unit # 14 – (stand # 056)

11 acres, year of origin 1957

Residual trees per acre after harvest operations are complete- 80

This unit was originally part of a larger unit but has been broken up for prescription reasons and is now in two pieces, separated by unit 15 (which has a different prescription). The unit generally faces south and east and has slopes running from gentle to moderate. One live buffered stream lies adjacent to the northern boundary of the northern piece and live buffered streams lie to either side of the southern piece.

It is unlikely that any skyline roads will pass through the buffers, but should skyline roads pass through the buffers, no yarding through the buffers is planned.

Both landings sit on or adjacent to the 113 spur and other than clearing, little work to make them suitable for use is anticipated.

Landing A is the northern landing and planned as a yoader landing in a "fan" setting, using tailtrees located along the unit boundary to help meet suspension requirements. Horizontal spans may reach up to 600 feet. Landing B is planned as a skyline landing located in an old landing area. This landing is will also act as a tractor landing for a portion of unit 20. The analysis of a field run profile indicates that it will be necessary to use **intermediate supports**, as well as tailtrees on several of the skyline roads from this landing.

Unit # 15 – (stand # 056)

9 acres, year of origin 1957

Residual trees per acre after harvest operations are complete- 60

As mentioned in the narrative for unit 14, this was originally part of a larger stand but was divided for prescription purposes. In general this is the more gentle ground of the original stand, slopes throughout the unit are gentle (less than 30%). The general aspect is south and east. An old grownover system road (3405-136) passes through the unit and may in part be used as a skid road, should the operator choose to do so.

One intermittent buffered stream begins within the unit and one year around live stream is buffered along the southern boundary but all yarding will be directed away from the buffers.

Landing A sits at the jct. of the 113 and 136 and will take little other than clearing to make it suitable for use. It is also planned as a tractor landing for a small portion of unit #20. One old grownover spur 580 feet in length will be reopened to service landing B. It is in good shape and will take little other than clearing to make it and the landing suitable for use.

Landing A is designed as a tractor landing, although it could easily be a yoader or skyline landing should the operator choose to do so. No slopes greater than 30% will be serviced by it and no streams are involved. As a skyline or yoader landing, it will be necessary to use tailtrees located

along the unit boundary to meet suspension requirements. Landing B is planned as both a yoader and tractor landing, yoader for that ground lying to the south and east, while it will serve the ground to the north and west as a tractor landing. To meet suspension requirements for the yoader portion, it will be necessary to use tailtrees located along the unit boundary, although it is likely that the more southern cable roads will pass through the buffer and anchor on the opposite slope.

Unit # 17 – (stand # 066)

22 acres, year of origin 1960

Residual trees per acre after harvest operations are complete- 65

This unit lies at the east end of the 3405-114 and lies on the point of a ridge, having aspects of north, east and south. The unit is composed mostly of moderate slopes, but a couple of benches exist near the bottom of the unit.

No live streams begin within the unit, but tributaries lie on either side of the unit and both are buffered. Passing skyline roads through the buffer is anticipated, but no yarding is planned through the buffers.

The 114 spur ends at landing B, but prior to entering the unit an old grownover spur 200 feet in length, peels off to follow the ridge top and will be re-opened. This spur will take little other than clearing to make it suitable for use, although some earth work will be necessary to make the small landing area suitable in size. Another short spur 100 feet in length, will be re-opened to service landing C. Like the spur into landing A, it will only take clearing to make it suitable for use but, will take a little earth work to make the landing of suitable size.

This unit is designed to be yarded to 3 landings (labeled A, B, and C) and all are planned as skyline landings in "fan" type settings. Due to the "roll" of the ground downslope from landings B and C, field run profiles indicate that it will be necessary to use **intermediate supports** on many of the skyline roads from these two landings. The analysis also indicates that for best payload results from the southern skyline roads from landing C, anchoring across Rock Creek is the preferred tailhold. For those skyline roads where anchoring across the creek(outside the unit) is not an option, tailtrees located along the unit boundary will be necessary.

Unit # 19 – (stand # 050 & 062)

7 acres, year of origin 1965 & 1964

Residual trees per acre after harvest operations are complete- 55 or 75??

This unit lies west of (above)road 3405-113 and is divided into 4 separate pieces, the result of several streams along this slope. The aspects of these units is generally east, with the slopes up to 30%.

No live streams exist within the unit boundaries, but often lie buffered adjacent to the north and south boundary.

No roads are planned for this unit, although tractor skid trails will be developed.

This unit is planned to be yarded using a ground based system, with those areas lying immediately adjacent to the 113 spur picked up with a loader walking the road. Three landings (labeled A, C, and D) are planned for this unit. An additional landing will be used in conjunction with being a skyline landing for unit 14 – landing B, to service the northern piece of the 4 pieces. Landing A was originally a landing location when the sale was logged the first go-around. While landings C and D are located in the 113 spur.

Unit # 20 – (stand # 050)

26 acres, year of origin 1965 & 1964

Residual trees per acre after harvest operations are complete- 55 or 75??

This unit lies on the west side of the 3405-113 and is divided into 2 separate pieces by a buffered stream generally running from west to east. The greatest portion of this unit has an eastern aspect with a little of both north and south faces. Slopes tend to be less than 30% but in some areas it is closer to 50%.

One buffered stream passes through the unit and the logging plan is to yard away from this buffer. It is not expected that any skyline roads or yarding will occur within or through the buffer.

One old grownover “temp” spur (920 feet in length) will be re-opened to provide access to 2 planned landings. This spur is in good shape and will take little other than clearing to make it suitable for use. Landing A is located at the northern end of the spur on an old landing, which sits on a large bench. Landing B is located about 2/3 of the way along this old spur and near the big curve in the spur.

This unit is planned to be yarded to 4 landings (labeled A, B, C and D). Landing A is planned as a “fan” setting skyline landing. It is primarily intended to yard that area lying upslope and to the south and west of the landing. This will generally be **downhill yarding** with the greatest slopes approaching 50%. Due to the large nature of the bench where the landing is located and the more gentle slopes approaching the bench, run-out room for the incoming turns is suitable to meet any safety concerns. A haulback will be necessary for this landing. Landing B is designed to be a yoader landing, yarding that area below the spur and down to the 113. Tailtrees located adjacent to the 113 will be necessary. Landing C is located near the beginning of the temp spur and intended to service those areas to the north and northeast of the landing area. Landing D is intended to act as a tractor landing, providing a landing area for the northern piece of this unit. This is not a large landing, and quite a bit of wood will pass through it, suggesting that a “**hot loading**” may be necessary. This in part will be determined by the operations of the operator.

Unit # 21 – (stand # 012)

10 acres, year of origin 1959

Residual trees per acre after harvest operations are complete- 55

This unit lies at the northwest end of the 3409-116 spur. This is a system road but hasn't been maintained in some time and is well brushed in as well as having blow down blocking it. The unit covers gentle ground with slopes not exceeding 35% (except immediately north of the landing) and has a northern aspect.

No live streams exist within the unit boundaries, hence no buffered streams.

No new temporary roads are planned for this unit. As mentioned earlier, the 116 spur is brushed in solidly as well as having numerous old wind throw in the road and will take some clearing to make it suitable for service.

This unit is designed to be yarded to one landing (labeled A) located at the end of the 116 spur. It will be a "fan" skyline setting, with all but one or two skyline roads being single span. On one or two of the skyline roads to the east of due north it will likely be necessary to use **intermediate supports** to meet suspension requirements. On all other skyline roads tailtrees located along the unit boundary will suffice. A narrow area stretching back up the ridge south of the landing is planned for tractor yarding and will use the one landing.







## Rock Thin Unit Summary Sheet

### Central Coast Ranger District

#### General Information

**Unit # :** 21 **Stand # :** 305012  
**Legal Location:** T.12S., R7W., Sec. 15 **Acres:** 10  
**Photo Number:** Year of Origin: 1959  
**Unit Designation:** Residual TPA Post Harvest: 55  
**Recon by/Date:** Bunk 2011

#### Volume Information

**Source of volume estimate:** \_\_\_\_\_ **Estimated Volume:** \_\_\_\_\_

#### Special Considerations

	Yes	No		Yes	No
Power Lines		X	Fences		X
Invasive/Sensitive Plants		X	Heritage Sites		X
Dump Sites		X	Meadows		X
Survey Monuments		X	Water Systems		X
Improvements		X	Other		X

#### Road and Landing Information

Landing	Road Type	Road Length	Road Status		Landing	Road Type	Road Length	Road Status
A	3409-116		Existing					

#### Notes

This unit is designed to be yarded to one landing (A) located at the northwest end of the 3409-116 spur. The spur appears to be generally in good shape, although heavily brushed in and will need clearing prior to use. The landing is also in good shape and will only need clearing to make it suitable for use.

[illegible]

## Rock Thin Unit Summary Sheet

### Central Coast Ranger District

#### General Information

Unit # :	<u>20</u>	Stand # :	<u>305050</u>
Legal Location:	<u>T.12S., R.7W., Sec.27</u>	Acres:	<u>26</u>
Photo Number:	Year of Origin:		<u>1965</u>
Unit Designation:	Residual TPA Post Harvest:		<u>75 / 55</u>
Recon by/Date:	<u>Bunk 2011</u>		

#### Volume Information

Source of volume estimate:	Estimated Volume:
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#### Special Considerations

	Yes	No		Yes	No
Power Lines		X	Fences		X
Invasive/Sensitive Plants		X	Heritage Sites		X
Dump Sites		X	Meadows		X
Survey Monuments		X	Water Systems		X
Improvements		X	Other		X

#### Road and Landing Information

Landing	Road Type	Road Length	Road Status		Landing	Road Type	Road Length	Road Status
A	Non-system	920	Existing					
B	Non-system		Existing					
C	System	3405-113	Existing					
D	System	3405-113	Existing					

#### Notes

Landings A and B are located along or on the same spur (landing A being at the west end and landing B being located midway along the spur. The spur is in good shape and will take little other than clearing to make it suitable for use. Landing A is located on a large bench and will not take too much to make it suitable for use, while landing B is a "yoader" landing, the landing may take a small amount of earth movement to make it suitable. Landing C is a pretty gentle area near the junction of the 113 spur and the spur servicing A & B. It will take little other than clearing to make it suitable for use. Landing D is located in the 113 spur and will likely take some work to make adequate to support a "hot decking" show. Due to the size of the landing and the amount of wood which will be yarded to it, it will likely be necessary to "hot load" (load the logs onto trucks nearly as fast as they come to the landing) due to the absence of a large decking area.

[illegible]

## Rock Thin Unit Summary Sheet

### Central Coast Ranger District

#### General Information

<b>Unit # :</b>	<b><u>19</u></b>	<b>Stand # :</b>	<b><u>305062 &amp; 050</u></b>
Legal Location:	<u>T.12S., R.7W., Sec. 27</u>	Acres:	<u>7</u>
Photo Number:	Year of Origin:		<u>1964 &amp; 1965</u>
Unit Designation:	Residual TPA Post Harvest:		<u>55</u>
Recon by/Date:	<u>Bunk 2011</u>		

#### Volume Information

Source of volume estimate:	Estimated Volume:
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#### Special Considerations

	Yes	No		Yes	No
Power Lines	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Fences	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Invasive/Sensitive Plants	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Heritage Sites	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Dump Sites	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Meadows	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Survey Monuments	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Water Systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Improvements	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other	<input type="checkbox"/>	<input checked="" type="checkbox"/>

#### Road and Landing Information

Landing	Road Type	Road Length	Road Status		Landing	Road Type	Road Length	Road Status
A	3405-114		Existing					
C	3405-113		Existing					
D	3405-113		Existing					
B	3405-113		Existing					

#### Notes

Landing A is located at the junction of the 113 & 114 spurs and is an old existing landing (located just outside the unit 19 boundary. Little work other than clearing, will make it suitable for use. Landing C and D are located in the 113 spur and are not large. Some work will be required to make them suitable for use as tractor landings. Landing B is a "shared / common" landing with unit 14. Costing for improvement should only be done once, although the landing will service portions of both units.

[illegible]

## Rock Thin Unit Summary Sheet

### Central Coast Ranger District

#### General Information

**Unit # :** 17 **Stand # :** 305066  
**Legal Location:** T.12S., R.7W., Sec. 27 **Acres:** 22  
**Photo Number:** Year of Origin: 1960  
**Unit Designation:** Residual TPA Post Harvest: 65  
**Recon by/Date:** Bunk 2011

#### Volume Information

**Source of volume estimate:** \_\_\_\_\_ **Estimated Volume:** \_\_\_\_\_

#### Special Considerations

	Yes	No		Yes	No
Power Lines		X	Fences		X
Invasive/Sensitive Plants	X		Heritage Sites		X
Dump Sites		X	Meadows		X
Survey Monuments		X	Water Systems		X
Improvements		X	Other		X

#### Road and Landing Information

Landing	Road Type	Road Length	Road Status		Landing	Road Type	Road Length	Road Status
A	non-system	200	existing					
B	3405-114		existing					
C	non-system	100	existing					

#### Notes

Landing A lies at the end of an old tractor road along the ridgetop (highest point of the unit). It will take clearing and some landing improvement to make it suitable for use. Landing B lies at what appears to be the end of the 114 spur and will also take some work to make it suitable for use. Landing C is located along an old cat trail and both the spur and landing will take some work to make them suitable for use.

[illegible]



## Rock Thin Unit Summary Sheet

### Central Coast Ranger District

#### General Information

**Unit # :** 15 **Stand # :** 305056  
**Legal Location:** T.12S., R.7W., Sec. 27 **Acres:** 9  
**Photo Number:** Year of Origin: 1957  
**Unit Designation:** Residual TPA Post Harvest: 60  
**Recon by/Date:** Bunk 2011

#### Volume Information

**Source of volume estimate:** \_\_\_\_\_ **Estimated Volume:** \_\_\_\_\_

#### Special Considerations

	Yes	No		Yes	No
Power Lines		X	Fences		X
Invasive/Sensitive Plants	X		Heritage Sites		X
Dump Sites		X	Meadows		X
Survey Monuments		X	Water Systems		X
Improvements		X	Other		X

#### Road and Landing Information

Landing	Road Type	Road Length	Road Status		Landing	Road Type	Road Length	Road Status
A	3405-113		Existing					
B	non-system	580'	Existing					

#### Notes

Landing A is located at the junction of the 113 and 136 spur, with suitable room for a landing and little work necessary to make it suitable for use. Landing B is located at the end of a 580' old spur which is in good shaped and needing little other than clearing to make it suitable for use. The landing itself also needs little other than clearing to make it suitable.

[illegible]

**(Enter Sale Name) Thin Unit Summary Sheet**

**Central Coast Ranger District**

**General Information**

<b>Unit # :</b>	<b>14</b>	<b>Stand # :</b>	<b>305056</b>
Legal Location:	T.12S., R.7W., Sec.27	Acres:	10.55
Photo Number:	Year of Origin:		1957
Unit Designation:	Residual TPA Post Harvest:		80
Recon by/Date:	Bunk 2011		

**Volume Information**

Source of volume estimate:	Estimated Volume:
----------------------------	-------------------

**Special Considerations**

	Yes	No		Yes	No
Power Lines		X	Fences		X
Invasive/Sensitive Plants	X		Heritage Sites		X
Dump Sites		X	Meadows		X
Survey Monuments		X	Water Systems		X
Improvements		X	Other		X

**Road and Landing Information**

Landing	Road Type	Road Length	Road Status		Landing	Road Type	Road Length	Road Status
A	3405-113		Existing					
B	3405-113		Existing					

**Notes**

Both landings are located in the 113 spur, and both will take little other than clearing to make them suitable for use.

[illegible]

**(Enter Sale Name) Thin Unit Summary Sheet**

**Central Coast Ranger District**

**General Information**

<b>Unit # :</b>	<u>13</u>	<b>Stand # :</b>	<u>305101</u>
Legal Location:	<u>T. 12S., R. 7W., Sec. 27</u>	Acres:	<u>2</u>
Photo Number:	Year of Origin:		<u>1968</u>
Unit Designation:	Residual TPA Post Harvest:		<u>50</u>
Recon by/Date:	<u>Bunk 2011</u>		

**Volume Information**

Source of volume estimate:	Estimated Volume:
----------------------------	-------------------

**Special Considerations**

	Yes	No		Yes	No
Power Lines		X	Fences		X
Invasive/Sensitive Plants		X	Heritage Sites		X
Dump Sites		X	Meadows		X
Survey Monuments		X	Water Systems		X
Improvements		X	Other		X

**Road and Landing Information**

Landing	Road Type	Road Length	Road Status		Landing	Road Type	Road Length	Road Status
A	3405-113		Existing					

**Notes**

This unit has one planned landing located in the 113 spur, which will take little more than clearing to make it suitable for use.

[illegible]

**(Enter Sale Name) Thin Unit Summary Sheet**

**Central Coast Ranger District**

**General Information**

<b>Unit # :</b>	<u>12</u>	<b>Stand # :</b>	<u>305048</u>
Legal Location:	<u>T.12S., R.7W., Sec.27</u>	Acres:	<u>5</u>
Photo Number:	Year of Origin:		<u>1957</u>
Unit Designation:	Residual TPA Post Harvest:		<u>60</u>
Recon by/Date:	<u>Bunk 2011</u>		

**Volume Information**

Source of volume estimate: \_\_\_\_\_ Estimated Volume: \_\_\_\_\_

**Special Considerations**

	Yes	No		Yes	No
Power Lines		X	Fences		X
Invasive/Sensitive Plants		X	Heritage Sites		X
Dump Sites		X	Meadows		X
Survey Monuments		X	Water Systems		X
Improvements		X	Other		X

**Road and Landing Information**

Landing	Road Type	Road Length	Road Status		Landing	Road Type	Road Length	Road Status
A	non-system	230'	Existing					

**Notes**

Landing A is located at the east end of an old blocked spur, which is in good shape and will take little work to make it suitable for use. The landing area itself will take some work to make it suitable for use.

[illegible]



## Rock Thin Unit Summary Sheet

### Central Coast Ranger District

#### General Information

<b>Unit # :</b>	<u>9</u>	<b>Stand # :</b>	<u>305043</u>
Legal Location:	<u>T.12S., R.7W., Sec. 22</u>	Acres:	<u>8</u>
Photo Number:	Year of Origin:		<u>1956</u>
Unit Designation:	Residual TPA Post Harvest:		<u>75</u>
Recon by/Date:			

#### Volume Information

Source of volume estimate: \_\_\_\_\_ Estimated Volume: \_\_\_\_\_

#### Special Considerations

	Yes	No		Yes	No
Power Lines	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Fences	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Invasive/Sensitive Plants	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Heritage Sites	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Dump Sites	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Meadows	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Survey Monuments	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Water Systems	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Improvements	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Other	<input type="checkbox"/>	<input checked="" type="checkbox"/>

#### Road and Landing Information

Landing	Road Type	Road Length	Road Status		Landing	Road Type	Road Length	Road Status
A	non-system	230'	Existing					
B	3405		Existing					
C	3405-113		Existing					

#### Notes

Landing A is located at the end (230') of an old abandon spur. This spur is in good shape, but some work of the landing area will be necessary, as road waste has been placed there and will need to be moved or at least relocated on the same landing in a different spot. Landing B is located on road 3405 and will take little other than clearing to make it suitable for use, as is the case for landing C, located near the northwest corner of the unit.

[illegible]

## Central Coast Ranger District

Legal Location:	<u>T.12S., R.7W., Sec. 22</u>	Acres:	<u>2</u>
Photo Number:	Year of Origin:		<u>1973</u>
Unit Designation:	Residual TPA Post Harvest:		<u>??</u>
Recon by/Date:	<u>Bunk 2011</u>		

Source of volume estimate: \_\_\_\_\_ Estimated Volume: \_\_\_\_\_

	Yes	No		Yes	No
Power Lines		X	Fences		X
Invasive/Sensitive Plants		X	Heritage Sites		X
Dump Sites		X	Meadows		X
Survey Monuments		X	Water Systems		X
Improvements		X	Other		X

[illegible]

A short spur is going to be built off the 113 to get up on the bench (unit 10) that was previously tractor yarded. Skidding will be down this new temp spur and then down the 113 to landing A.

[illegible]

# Rock Thin Unit Summary Sheet

## Central Coast Ranger District

### General Information

Unit # : 8 Stand # : 305039  
 Legal Location: T.12S., R7W., Sec. 22 Acres: 10  
 Photo Number: Year of Origin: 1965  
 Unit Designation: Residual TPA Post Harvest: 80  
 Recon by/Date: Bunk 2011

### Volume Information

Source of volume estimate: Estimated Volume:

### Special Considerations

	Yes	No		Yes	No
Power Lines		X	Fences		X
Invasive/Sensitive Plants		X	Heritage Sites		X
Dump Sites		X	Meadows		X
Survey Monuments		X	Water Systems		X
Improvements		X	Other		X

### Road and Landing Information

Landing	Road Type	Road Length	Road Status		Landing	Road Type	Road Length	Road Status
A	3405		Existing					
B	3405		Existing					
C	3405		Existing					

### Notes

Landings A and B are located in wide turnouts along the 3405 and should easily accommodate skyline landings. Landing C is a proposed tractor landing located at an old "barrow" pit along the 3405. It might take a small amount of work depending on how the operator chooses to approach it.

[illegible]

## Rock Thin Unit Summary Sheet

### Central Coast Ranger District

#### General Information

**Unit # :** 7 **Stand # :** 305030  
**Legal Location:** T.12S., R. 7W., Sec. 22 **Acres:** 17  
**Photo Number:** Year of Origin: 1959  
**Unit Designation:** Residual TPA Post Harvest: 80 ?  
**Recon by/Date:** Bunk 2011

#### Volume Information

**Source of volume estimate:** \_\_\_\_\_ **Estimated Volume:** \_\_\_\_\_

#### Special Considerations

	Yes	No		Yes	No
Power Lines		X	Fences		X
Invasive/Sensitive Plants		X	Heritage Sites		X
Dump Sites		X	Meadows		X
Survey Monuments		X	Water Systems		X
Improvements		X	Other		X

#### Road and Landing Information

Landing	Road Type	Road Length	Road Status		Landing	Road Type	Road Length	Road Status
A	non-system	190'	New					
B	3405-117		Existing					
C	3405-117		Existing					
D	3405		Existing					
E	3405		Existing					

#### Notes

The "new" temp spur that services landing A proceeds up a slope for approximately 80' to reach a bench that is suitable for use as a tractor landing. It will require that some earth be moved, but of a minimal nature. Landings B, C, D and E are all on or adjacent to existing roads and will take little other than clearing to make them suitable for use.





## Rock Thin Unit Summary Sheet

### Central Coast Ranger District

#### General Information

<b>Unit # :</b>	<b><u>5</u></b>	<b>Stand # :</b>	<b><u>305026 &amp; 030</u></b>
Legal Location:	<u>T. 12S., R. 7W., Sec. 22</u>	Acres:	<u>7</u>
Photo Number:	Year of Origin:		<u>1965 &amp; 1959</u>
Unit Designation:	Residual TPA Post Harvest:		<u>70 ??</u>
Recon by/Date:			

#### Volume Information

Source of volume estimate:	Estimated Volume:
----------------------------	-------------------

#### Special Considerations

	Yes	No		Yes	No
Power Lines		X	Fences		X
Invasive/Sensitive Plants	X		Heritage Sites		X
Dump Sites		X	Meadows		X
Survey Monuments		X	Water Systems		X
Improvements		X	Other		X

#### Road and Landing Information

Landing	Road Type	Road Length	Road Status		Landing	Road Type	Road Length	Road Status
A	non-system	300'	Existing					
B	3405-117		Existing					

#### Notes

Landing A lies at the end of an old grownover spur 300' in length and is placed toward the center of the tractor area, while landing B sits on the 117 spur and will skyline yard the piece to the north. Landing B could also act as a tractor landing for a portion of the area to the south, as the ground is gentle immediately south of the landing and would shorten up some of the tractor yarding.

[illegible]

# RockThin Unit Summary Sheet

## Central Coast Ranger District

### General Information

Unit # : 4 Stand # : 305021  
 Legal Location: T. 12S., R. 7W., Sec. 23 Acres: 14  
 Photo Number: Year of Origin: 1968  
 Unit Designation: Residual TPA Post Harvest: 55  
 Recon by/Date: Bunk 2011

### Volume Information

Source of volume estimate: Estimated Volume:

### Special Considerations

	Yes	No		Yes	No
Power Lines		X	Fences		X
Invasive/Sensitive Plants		X	Heritage Sites		X
Dump Sites		X	Meadows		X
Survey Monuments		X	Water Systems		X
Improvements		X	Other		X

### Road and Landing Information

Landing	Road Type	Road Length	Road Status		Landing	Road Type	Road Length	Road Status
A	3405-117		Existing					
B	3405-117		Existing					
C	non-system	90'	New					
D	3405-117		Existing					

### Notes

Landing A is located at the extreme east end of the 117 spur, while landing B is located along this spur. Landing C is located off the 117 spur 90', at the southern edge of a bench. Landing D is located on the west end of unit and in the 117 spur.



## Rock Thin Unit Summary Sheet

### Central Coast Ranger District

#### General Information

**Unit # :** 3 **Stand # :** 305010  
**Legal Location:** T.12S., R.7W., Sec. 15 **Acres:** 18  
**Photo Number:** Year of Origin: 1958  
**Unit Designation:** Residual TPA Post Harvest: 65  
**Recon by/Date:** Bunk 2011

#### Volume Information

**Source of volume estimate:** \_\_\_\_\_ **Estimated Volume:** \_\_\_\_\_

#### Special Considerations

	Yes	No		Yes	No
Power Lines		X	Fences		X
Invasive/Sensitive Plants	X		Heritage Sites		X
Dump Sites		X	Meadows		X
Survey Monuments		X	Water Systems		X
Improvements		X	Other		X

#### Road and Landing Information

Landing	Road Type	Road Length	Road Status		Landing	Road Type	Road Length	Road Status
A	non-system	1,080'	Existing					
B	non-system	0'	Existing					
C	3409-115	0'	Existing					
D	non-system	270'	new					
E	3409-115		Existing					

#### Notes

Landing A lies near the end of an old grownover spur, while landing B lies midway along "A's" spur. Landing C is located along the 3409, while landing D is located at the end of a "new" temp spur which passes over ground previously tractor yarded and this spur is 270' in length. Landing E is located at the end of the 3409-115 spur and is using the original landing.

[illegible]

Key: Logging System abbreviations are Skyline (S), Ground-Based (GB), Yoader (Y), Helicopter (H), or a combination of logging systems for each landing. Guyline anchor trees abbreviations are P for plantation, M for mature, and B for both. Special anchor abbreviations are Equipment (Eq), Deadmen (D), Earth (E), guyline (G) anchor, and tailhold (T). Abbreviations for intermediate supports (IS) and tailtree (TT).

### Unit Totals and Averages

Average Yarding Distance:	<u>206</u>	Average Net Pound per Payload:	<u>2800</u>
Average Mainline Tension:	<u>4700</u>	Average Slope:	<u>30%</u>
Maximum Tagline Needed:		Total Number of Corridors:	<u>15</u>
Maximum Yarding Distance:	<u>430</u>	Total Number of Landings:	<u>5</u>

## Notes

Landing A will serve as a tractor landing for much of the area to the east of the temp spur, while landing B will capture what landing A doesn't get on the east side of the spur. Landing B will also serve as a skyline landing yarding some of the area to the south, all the area to the west (to the buffer) and that area to the north (on the west side of the spur). Landing C is a Yoader landing designed to pick up the south portion of the unit, some of this area could easily be yarded using a tractor. Landings D & E are designed to utilize both skyline and tractor also.

## Rock Thin Unit Summary Sheet

### Central Coast Ranger District

#### General Information

**Unit # :** 2 **Stand # :** 305014  
**Legal Location:** T12S., R.7W., Sec.14 **Acres:** 13  
**Photo Number:** Year of Origin: 1959  
**Unit Designation:** Residual TPA Post Harvest: 65  
**Recon by/Date:** Bunk 2011

#### Volume Information

**Source of volume estimate:** \_\_\_\_\_ **Estimated Volume:** \_\_\_\_\_

#### Special Considerations

	Yes	No		Yes	No
Power Lines		X	Fences		X
Invasive/Sensitive Plants	X		Heritage Sites		X
Dump Sites		X	Meadows		X
Survey Monuments		X	Water Systems		X
Improvements		X	Other		X

#### Road and Landing Information

Landing	Road Type	Road Length	Road Status		Landing	Road Type	Road Length	Road Status
A	non-system	740'	Existing					
B	non-system	315'	Existing					
C	3409		Existing					
D	3409		Existing					
E	3409		Existing					

#### Notes

Both landings A and B lie at the ends of old grownover spurs and are both planned as skyline landings. Landing C is located adjacent to road 3409 and is planned as a yoader landing. Landings D and E are located in or adjacent to 3409 and are planned as ground based landings.

[illegible]



## Rock Thin Unit Summary Sheet

### Central Coast Ranger District

#### General Information

<b>Unit # :</b>	<b><u>1</u></b>	<b>Stand # :</b>	<b><u>305013</u></b>
Legal Location:		T.12 S., R. 7 W., Sec. 14	Acres: <u>23</u>
Photo Number:		Year of Origin:	<u>1959</u>
Unit Designation:		Residual TPA Post Harvest:	<u>80</u>
Recon by/Date:		Bunk <u>2011</u>	

#### Volume Information

Source of volume estimate:	Estimated Volume:
----------------------------	-------------------

#### Special Considerations

	Yes	No		Yes	No
Power Lines		X	Fences		X
Invasive/Sensitive Plants		X	Heritage Sites		X
Dump Sites		X	Meadows		X
Survey Monuments		X	Water Systems		X
Improvements		X	Other		X

#### Road and Landing Information

Landing	Road Type	Road Length	Road Status		Landing	Road Type	Road Length	Road Status
A	Non-system	230'	New					
B	3409		Existing					
C	3409		Existing					

#### Notes

Landing A lies at the east end of a 230' "new" temp spur, with grades up to 18% and is a skyline landing. Landings B and C are located in road 3409. Landing B is planned as a skyline landing, while landing C is planned as a tractor (ground based) landing.

[illegible]